IN THE CLAIMS:

1-32 (Canceled)

33. (Currently Amended) The reactant composition of claim ~~32~~ 78 wherein said procatalyst is selected from a compound of the formula:

$$[R'ML'_xA']$$

wherein M represents a Group 10 transition metal; R' represents hydrogen or an anionic ~~hydrocarbyl~~ ligand; L' represents a Group 15 neutral electron donor ligand; A' is an anionic leaving group; x is 1 or 2.

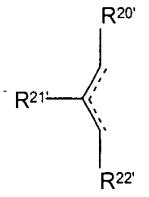
34. (Original) The reactant composition of claim 33 wherein M is selected from the group consisting of nickel, palladium, and platinum.

35. (Original) The reactant composition of claim 33 wherein R' is selected from the group consisting of hydrogen; linear and branched C_1-C_{20} alkyl; linear and branched C_2-C_{20} alkenyl; allylic ligands and canonical forms thereof; substituted and unsubstituted C_5-C_{10} cycloalkyl; substituted and unsubstituted C_6-C_{15} cycloalkenyl; substituted and unsubstituted C_7-C_{30} aralkyl; substituted and unsubstituted, C_6-C_{30} aryl; C_6-C_{30} heteroatom containing aryl; wherein said heteroatom is selected from the group consisting of sulfur, oxygen, nitrogen, phosphorus, wherein the substituents in said substituted radicals are selected from the group consisting of linear or branched C_1-C_5 alkyl, linear or branched C_1-C_5 haloalkyl, linear or branched C_2-C_5 alkenyl, haloalkenyl, halogen, and phenyl optionally substituted with linear or branched C_1-C_5 alkyl, linear or branched C_1-C_5 haloalkyl, and halogen; and a hydrocarbyl containing ligand selected from the formulae:

$-C_{d'}H_{2d'}-$, $-C_{d'}H_{2d'}X\rightarrow$

each of said ligands together with the Group 10 metal form a metallacycle or heteroatom containing metallacycle, wherein d' represents an integer from 3 to 10, and X→ represents an alkenyl or heteroatom containing moiety that coordinates to the Group 10 metal center.

36. (Original) The reactant composition of claim 35 wherein said allylic ligand is represented by the formula:



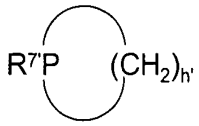
wherein $R^{20'}$, $R^{21'}$, and $R^{22'}$ each independently represent hydrogen, halogen, linear and branched C_1-C_5 alkyl, C_5-C_{10} cycloalkyl, linear and branched C_1-C_5 alkenyl, C_6-C_{30} aryl, and C_7-C_{30} aralkyl, each of the foregoing radicals optionally substituted with a substituent selected from linear and branched C_1-C_5 alkyl, linear and branched C_1-C_5 haloalkyl, halogen, and phenyl which can optionally be substituted with linear and branched C_1-C_5 alkyl, linear and branched C_1-C_5 haloalkyl, and halogen; any two of $R^{20'}$, $R^{21'}$, and $R^{22'}$ can be linked together with the carbon atoms to which they are attached to form a cyclic or multi-cyclic ring, each optionally substituted with linear or branched C_1-C_5 alkyl, linear or branched C_1-C_5 haloalkyl, and halogen.

37. (Original) The reactant composition of claim 33 wherein said group 15 electron donor ligand is selected from the group consisting of amines, pyridines, arsines, stibines and organophosphorus containing compounds.

38. (Original) The reactant composition of claim 37 wherein said organophosphorus containing ligand is selected from a compound of the formula:

$$P(R^{7'})_g[X'(R^{7'})_h]_{3-g}$$

wherein X' is oxygen, sulfur, nitrogen, or silicon; g is 0, 1, 2, or 3; h is 1, 2, or 3, with the proviso that when X' is a silicon atom, h is 3, when X' is an oxygen or sulfur atom h is 1, and when X' is a nitrogen atom, h is 2; $R^{7'}$ is independently selected from hydrogen, linear and branched C_1-C_{10} alkyl, C_5-C_{10} cycloalkyl, linear and branched C_1-C_{10} alkoxy, allyl, linear and branched C_2-C_{10} alkenyl, C_6-C_{12} aryl, C_6-C_{12} aryloxy, C_6-C_{12} arylsulfides, C_7-C_{18} aralkyl, cyclic ethers and thioethers, tri(linear and branched C_1-C_{10} alkyl)silyl, tri(C_6-C_{12} aryl)silyl, tri(linear and branched C_1-C_{10} alkoxy)silyl, triaryloxysilyl, tri(linear and branched C_1-C_{10} alkyl)siloxy, and tri(C_6-C_{12} aryl)siloxy, wherein each of the foregoing substituents can be optionally substituted with linear or branched C_1-C_5 alkyl, linear or branched C_1-C_5 haloalkyl, C_1-C_5 alkoxy, halogen, and combinations thereof; when g is 0 and X' is oxygen, any two or 3 of $R^{7'}$ can be taken together with the oxygen atoms to which they are attached to form a cyclic moiety; when g is 3 any two of $R^{7'}$ can be taken together with the phosphorus atom to which they are attached to represent a phosphacycle of the formula:



wherein $R^{7'}$ is as previously defined and h' is an integer from 4 to 11.

39. (Original) The reactant composition of claim 38 wherein g is 3 and $R^{7'}$ is independently selected from the group consisting of hydrogen, linear and branched C_1-C_{10} alkyl, C_5-C_{10} cycloalkyl, linear and branched C_1-C_{10} alkoxy, allyl, linear and branched C_2-C_{10} alkenyl, C_6-C_{12} aryl, and C_6-C_{12} aryloxy.

40. (Original) The reactant composition of claim 37 wherein said organophosphorus containing ligand is a phosphine selected from the group consisting of trimethylphosphine, triethylphosphine, tri-n-propylphosphine, triisopropylphosphine, tri-*n*-butylphosphine, tri-*sec*-butylphosphine, tri-*i*-butylphosphine, tri-*t*-butylphosphine, tricyclopentylphosphine, triallyl- phosphine, tricyclohexylphosphine, triphenylphosphine, trinaphthylphosphine, tri-*p*-tolylphosphine, tri-*o*-tolylphosphine, tri-*m*-tolylphosphine, tribenzylphosphine, tri(*p*-trifluoromethyl- phenyl)phosphine, tris(trifluoromethyl)phosphine, tri(*p*-fluorophenyl)phosphine, tri(*p*-trifluoromethylphenyl)phosphine, allyldiphenylphosphine, benzyldiphenylphosphine, bis(2-furyl)phosphine, bis(4-methoxyphenyl)-phenylphosphine, bis(4-methylphenyl)phosphine, bis(3,5-bis(trifluoromethyl)-phenyl)phosphine, *t*-butylbis(trimethylsilyl)phosphine, *t*-butyl-diphenylphosphine, cyclohexyldiphenylphosphine, diallylphenylphosphine, dibenzylphosphine, dibutylphenylphosphine, dibutylphosphine, di-*t*-butylphosphine, dicyclohexylphosphine, diethylphenylphosphine, di-*i*-butylphosphine, dimethylphenylphosphine, dimethyl(tri-methylsilyl)phosphine, diphenylphosphine, diphenylpropylphosphine, diphenyl(*p*-tolyl) phosphine, diphenyl(trimethylsilyl)phosphine, diphenylvinylphosphine, divinylphenylphosphine, ethyldiphenylphosphine, (2-methoxyphenyl) methylphenylphosphine, tri-n-octylphosphine, tris(3,5-bis(trifluoromethyl)phenyl) phosphine, tris(3-chlorophenyl)phosphine, tris(4-chloro-phenyl)phosphine, tris(2,6-dimethoxyphenyl)phosphine, tris(3-fluorophenyl)phosphine, tris(2-furyl)] phosphine, tris(2-methoxyphenyl)phosphine, tris(3-methoxyphenyl)phosphine, tris(4-methoxyphenyl)phosphine, tris(3-methoxypropyl)phosphine, tris(2-thienyl)-phosphine, tris(2,4,6-trimethylphenyl)phosphine, tris(trimethylsilyl)phosphine, isopropyldiphenylphosphine, dicyclohexylphenylphosphine, (+)-neomenthyldiphenyl phosphine, tribenzylphosphine, diphenyl-(2-methoxyphenyl)phosphine, diphenyl (pentafluorophenyl)phosphine, bis(pentafluorophenyl)-phenylphosphine, and tris(pentafluorophenyl)phosphine.

41. (Currently Amended) The reactant composition of claim [44] 79 wherein said labile neutral electron donor ligand is selected from the group consisting of DMF, DMSO, cyclooctadiene, water, chlorinated alkanes, alcohols, ethers, ketones, nitriles, arenes, phosphine oxides, organic carbonates and esters.

42. (Previously Presented) The reactant composition of claim 33 wherein said anionic leaving group is selected from the group consisting of halogen, nitrate, triflate, triflimide trifluoroacetate, tosylate, $AlBr_4^-$, AlF_4^-, $AlCl_4^-$, $AlF_3O_3SCF_3^-$, $AsCl_6^-$, $SbCl_6$, SbF_6^-, PF_6^-, BF_4^-,ClO_4^-, HSO_4^-, carboxylates, acetates, acetylacetonates, carbonates, aluminates, borates, hydrocarbyl and halogenated hydrocarbyl selected from hydride, linear and branched C_1-C_5 alkyl, linear and branched C_1-C_5 haloalkyl, C_5-C_{10} cycloalkyl, C_5-C_{10} cyclohaloalkyl, C_6-C_{10} aryl, and C_6-C_{10} haloaryl, wherein said cyclohaloalkyl and haloaryl groups are monosubstituted or multisubstituted with a halogen group selected from bromine, chlorine, fluorine, and iodine.

43. (Original) The reactant composition of claim 33 wherein said procatalyst is selected from a compound of group consisting of bis(triisopropylphosphine)(hydrido)palladium chloride, bis(triisopropylphosphine) (hydrido)palladium nitrate, bis(triisopropylphosphine)-(hydrido)palladium triflate, (allyl)palladium(triisopropylphosphine) chloride, (methallyl) palladium(triisopropyl-phosphine) chloride, (crotyl)palladium(triisopropylphosphine) chloride, (allyl)palladium(triisopropylphosphine) trifluoroacetate, (1,1-dimethyl-π-allyl-(triisopropyl-phosphine)palladium trifluoroacetate, (2-chloroallyl)palladium-(triisopropylphosphine) trifluoroacetate, (allyl)palladium(triisopropylphosphine) triflate, (crotyl)palladium(triisopropyl-phosphine) triflate, (methallyl)palladium (triisopropylphosphine) triflate, (allyl)palladium-(triisopropylphosphine) triflimide, (methallyl)palladium(triisopropylphosphine) triflimide, bis(tricyclohexyl-phosphine)(hydrido)palladium chloride, bis(tricyclohexylphosphine) (hydrido)

palladium nitrate, bis(tricyclohexylphosphine)(hydrido)palladium trifluoroacetate, bis(tricyclohexylphosphine)(hydrido)palladium formate, (allyl)palladium(tricyclohexyl-phosphine) chloride, (methallyl)palladium(tricyclohexylphosphine) chloride, (allyl)palladium-(tricyclohexylphosphine) trifluoroacetate, (allyl)palladium-(tricyclohexylphosphine) triflate, (methallyl)palladium(tricyclohexylphosphine) triflate, (crotyl)palladium(tricyclohexylphosphine) triflate, (methallyl)palladium (tricyclohexylphosphine) triflimide, (allyl)palladium-(tricyclohexylphosphine) *p*-tolylsulfonate, (allyl)palladium(tricyclohexylphosphine) triflimide, (allyl)palladium (tricyclopentylphosphine)chloride, (methallyl)palladium(tricyclopentyl-phosphine) chloride, (allyl)palladium(tricyclopentylphosphine) triflate, (crotyl)palladium-(tricyclopentylphosphine) triflate, (methallyl)palladium(tricyclopentylphosphine) triflate, (allyl)palladium(tricyclopentylphosphine) triflimide, (methallyl)palladium (tricyclopentyl-phosphine)triflimide, (allyl)palladium(triisopropylphosphine)C_6F_5, (allyl)palladium(tricycle-hexylphosphine)C_6F_5, and [(allyl)palladium($HOCH_3$) (triisopropylphosphine)][$B(O_2\text{-}3,4,5,6\text{-}Cl_4C_6)_2$].

44 (Canceled)

45. (Currently Amended) The composition of claim [44] 79 wherein said alkali metal cation is selected from the group consisting of lithium, sodium, and potassium; said alkaline earth metal cation is selected from the group consisting of beryllium, magnesium, calcium, strontium, and barium; said transition metal cation is selected from the group consisting of zinc, silver, and thallium; and said organic group cation is selected from ammonium, phosphonium, carbonium and silylium cations.

46. (Original) The reactant composition of claim 45 wherein said ammonium cation is selected from a compound of the formulae:

$[NHR^{41'}_3]^+$, $[NR^{41'}_4]^+$

wherein $R^{41'}$ independently represents a hydrocarbyl, silylhydrocarbyl, or perfluorocarbyl group, each containing 1 to 24 carbon atoms.

47. (Original) The reactant composition of claim 45 wherein said carbonium cation is selected from a compound of the formula:

$[R^{41'}_3C]^+$

wherein $R^{41'}$ independently represents a hydrocarbyl, silylhydrocarbyl, or perfluorocarbyl group, each containing 1 to 24 carbon atoms.

48. (Currently Amended) The reactant composition of claim [44] 79 wherein said weakly coordinating counteranion is selected from the group consisting of borates, aluminates, boratobenzene anions, carborane anions, and halocarborane anions.

49. (Original) The reactant composition of claim 48 wherein the weakly coordinating anion is a borate or aluminate of the formula:

$[M'(R^{24'})(R^{25'})(R^{26'})(R^{27'})]$

wherein M' is boron or aluminum and $R^{24'}$, $R^{25'}$, $R^{26'}$, and $R^{27'}$ independently represent fluorine, linear and branched C_1-C_{10} alkyl, linear and branched C_1-C_{10} alkoxy, linear and branched C_3-C_5 haloalkenyl, linear and branched C_3-C_{12} trialkylsiloxy, C_{18}-C_{36} triarylsiloxy, substituted and unsubstituted C_6-C_{30} aryl, and substituted and unsubstituted C_6-C_{30} aryloxy groups, wherein $R^{24'}$ to $R^{27'}$ can not simultaneously represent alkoxy or simultaneously represent aryloxy, and wherein said aryl and aryloxy groups when substituted are monosubstituted or multisubstituted and said substituents are independently selected from linear and

branched C_1-C_5 alkyl, linear and branched C_1-C_5 haloalkyl, linear and branched C_1-C_5 alkoxy, linear and branched C_1-C_5 haloalkoxy, linear and branched C_1-C_{12} trialkylsilyl, C_6-C_{18} triarylsilyl, and halogen selected from chlorine, bromine, and fluorine.

50. (Original) The reactant composition of claim 49 wherein said borate is selected from the group consisting of tetrakis(pentafluorophenyl)borate, tetrakis(3,5-bis(tri-fluoromethyl)phenyl)borate, tetrakis(2-fluorophenyl)borate, tetrakis(3-fluorophenyl)borate, tetrakis(4-fluorophenyl)borate, tetrakis(3,5-difluorophenyl)borate, tetrakis(2,3,4,5-tetra-fluorophenyl)borate, tetrakis (3,4,5,6-tetrafluorophenyl)borate, tetrakis(3,4,5-trifluorophenyl) borate, methyltris (perfluorophenyl)borate, ethyltris(perfluorophenyl)borate, phenyltris(perfluoro-phenyl)borate, tetrakis(1,2,2-trifluoroethylenyl)borate, tetrakis(4-tri-*i*-propylsilyl-tetrafluoro-phenyl)borate,tetrakis(4-dimethyl-*tert*-butylsilyltetrafluorophenyl)borate, (triphenylsiloxy)tris-(pentafluorophenyl)borate, (octyloxy)tris(pentafluorophenyl)borate, tetrakis[3,5-bis[1-methoxy-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]phenyl]borate, tetrakis[3-[1-methoxy-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]-5-(trifluoromethyl) phenyl]borate, and tetrakis[3-[2,2,2-trifluoro-1-(2,2,2-trifluoroethoxy)-1-(trifluoro-methyl)ethyl]-5-(trifluoromethyl)phenyl]borate.

51. (Original) The reactant composition of claim 49 wherein said aluminate is selected from the group consisting of tetrakis(pentafluorophenyl)aluminate, tris(nonafluoro-biphenyl)fluoroaluminate, (octyloxy)tris(pentafluorophenyl)aluminate, tetrakis(3,5-bis(trifluoro-methyl)phenyl)aluminate, and methyltris(pentafluorophenyl) aluminate.

52. (Original) The reactant composition of claim 48 wherein the weakly coordinating anion is a borate or aluminate of the formula:

$[M'(OR^{28'})(OR^{29'})(OR^{30'})(OR^{31'})]$

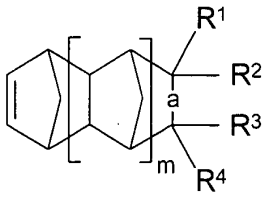
M' is boron or aluminum, $R^{28'}$, $R^{29'}$, $R^{30'}$, and $R^{31'}$ independently represent linear and branched C_1-C_{10} alkyl, linear and branched C_1-C_{10} haloalkyl, C_2-C_{10} haloalkenyl, substituted and unsubstituted C_6-C_{30} aryl, and substituted and unsubstituted C_7-C_{30} aralkyl groups, subject to the proviso that at least three of $R^{28'}$ to $R^{31'}$ must contain a halogen containing substituent; $OR^{28'}$ and $OR^{29'}$ can be taken together to form a chelating substituent represented by -O-$R^{32'}$-O-, wherein the oxygen atoms are bonded to M' and $R^{32'}$ is a divalent radical selected from substituted and unsubstituted C_6-C_{30} aryl and substituted and unsubstituted C_7- C_{30} aralkyl, wherein said aryl and aralkyl groups when substituted are monosubstituted or multisubstituted and said substituents are independently selected from linear and branched C_1-C_5 alkyl, linear and branched C_1-C_5 haloalkyl, linear and branched C_1-C_5 alkoxy, linear and branched C_1-C_5 haloalkoxy, linear and branched C_1-C_{12} trialkylsilyl, C_6-C_{18} triarylsilyl, and halogen selected from chlorine, bromine, and fluorine.

53. (Original) The reactant composition of claim 52 wherein said borate is selected from the group consisting of $[B(O_2C_6F_4)_2]^-$, $[B(OC(CF_3)_2(CH_3))_4]^-$, $[B(OC(CF_3)_2H)_4]^-$, $[B(OC(CF_3)(CH_3)H)_4]^-$, and $[B(OCH_2(CF_3))_4]^-$.

54. (Original) The reactant composition of claim 52 wherein said aluminate is selected from the group consisting of , $[Al(OC(CF_3)_2Ph)_4]^-$, $[Al(OC(CF_3)_2C_6H_4\text{-}4\text{-}CH_3)_4]^-$, $[Al(OC(CF_3)_3)_4]^-$, $[Al(OC(CF_3)(CH_3)H)_4]^-$, $[Al(OC(CF_3)_2H)_4]^-$, $[Al(OC(CF_3)_2C_6H_4\text{-}4\text{-}i\text{-}Pr)_4]^-$, $[Al(OC(CF_3)_2C_6H_4\text{-}4\text{-}t\text{-butyl})_4]^-$, $[Al(OC(CF_3)_2C_6H_4\text{-}4\text{-}SiMe_3)_4,]^-$, $[Al(OC(CF_3)_2C_6H_4\text{-}4\text{-}Si\text{-}i\text{-}Pr_3)_4]^-$, $[Al(OC(CF_3)_2C_6H_2\text{-}2,6\text{-}(CF_3)_2\text{-}4\text{-}Si\text{-}i\text{-}Pr_3)_4]^-$, $[Al(OC(CF_3)_2C_6H_3\text{-}3,5\text{-}(CF_3)_2)_4]^-$, $[Al(OC(CF_3)_2C_6H_2\text{-}2,4,6\text{-}(CF_3)_3)_4]^-$, and $[Al(OC(CF_3)_2C_6F_5)_4]^-$.

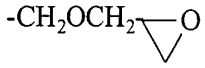
55. (Currently Amended) The reactant composition of claim [44] 79 wherein said activator salt is selected from the group consisting of lithium tetrakis(pentafluorophenyl)borate, sodium tetrakis(pentafluorophenyl)borate, lithium (diethylether) tetrakis(pentafluorophenyl) borate, lithium(diethylether)$_{2.5}$ tetrakis-(pentafluorophenyl)borate, lithium tris(isopropanol) tetrakis(pentafluoro-phenyl)borate, lithium tetrakis(methanol) tetrakis(pentafluorophenyl)borate, silver tetrakis(pentafluorophenyl)borate, tris(toluene)silver tetrakis(pentafluoro-phenyl)borate, trityl tetrakis(pentafluorophenyl)borate, N,N-dimethylanilinium tetrakis(pentafluorophenyl) borate, lithium tetrakis(3,5-bis(trifluoromethyl) phenyl)borate, sodium tetrakis(3,5-bis(trifluoro-methyl)phenyl)borate, N,N-dimethylanilinium tetrakis[3,5-bis(trifluoromethyl)phenyl]borate, silver tetrakis[3,5-bis(trifluoromethyl)phenyl]borate, tris(toluene)silver tetrakis[3,5-bis(trifluoromethyl) phenyl]borate, thallium tetrakis[3,5-bis(trifluoromethyl)phenyl]borate, $LiB(O_2C_6F_4)_2$, $LiB(OC(CH_3)(CF_3)_2)_4$, $LiAl(OC(CF_3)_2Ph)_4$, $LiAl(OC(CF_3)_2C_6H_4CH_3)_4$, $LiAl(OC(CH_3)(CF_3)_2)_4$, $LiAl(OC(CF_3)_3)_4$, $LiAl(OC(CF_3)_2C_6H_4$-4-*i*-$Pr)_4$, $LiAl(OC(CF_3)_2C_6H_3$-3,5-$(CF_3)_2)_4$, $LiAl(OC(CF_3)_2C_6H_2$-2,4,6-$(CF_3)_3)_4$, and $LiAl(OC(CF_3)_2C_6F_5)_4$.

56. (Previously Presented) The reactant composition claim 33, wherein said polycycloolefin comprises a monomer selected from a compound of the formula:

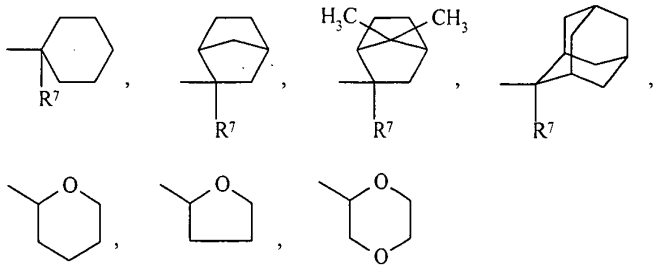


wherein "a" represents a single or double bond; m is an integer from 0 to 5; when "a" is a double bond one of R^1, R^2 and one of R^3, R^4 is not present; and R^1 to R^4 independently represent hydrogen, substituted and unsubstituted linear and

branched C_1-C_{10} alkyl, linear and branched C_1-C_{10} haloalkyl, substituted and unsubstituted linear and branched C_2-C_{10} alkenyl, linear and branched C_2-C_{10} haloalkenyl, substituted and unsubstituted linear and branched C_2-C_{10} alkynyl, substituted and unsubstituted C_4-C_{12} cycloalkyl, substituted and unsubstituted C_4-C_{12} halocycloalkyl, substituted and unsubstituted C_4-C_{12} cycloalkenyl, substituted and unsubstituted C_4-C_{12} halocycloalkenyl, substituted and unsubstituted C_6-C_{12} aryl, substituted and unsubstituted C_6-C_{12} haloaryl and substituted and unsubstituted C_7-C_{24} aralkyl, R^1 and R^2 or R^3 and R^4 can be taken together to represent a C_1-C_{10} alkylidenyl group, $-(CH_2)_nC(O)NH_2$, $-(CH_2)_nC(O)Cl$, $(CH_2)_nC(O)OR^5$, $-(CH_2)_n-OR^5$, $-(CH_2)_n-OC(O)R^5$, $-(CH_2)_n-C(O)R^5$, $-(CH_2)_n-OC(O)OR^5$, $-(CH_2)_nSiR^5$, $-(CH_2)_nSi(OR^5)_3$, $-(CH_2)_nC(O)OR^6$, and the group:

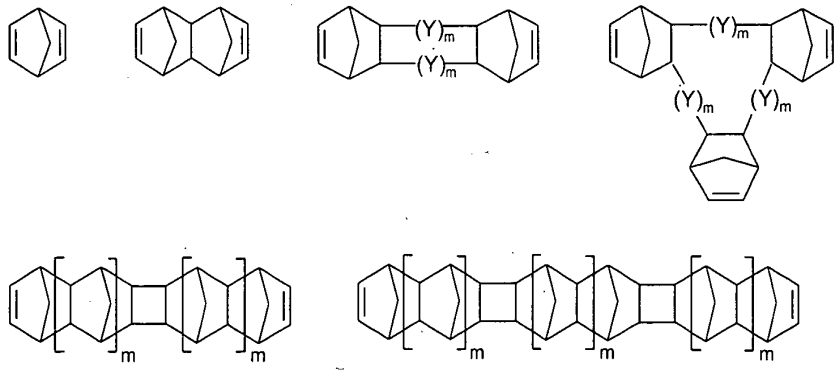


wherein n independently represents an integer from 0 to 10 and R^5 independently represents hydrogen, linear and branched C_1-C_{10} alkyl, linear and branched, C_2-C_{10} alkenyl, linear and branched C_2-C_{10} alkynyl, C_5-C_{12} cycloalkyl, C_6-C_{14} aryl, and C_7-C_{24} aralkyl; R^6 represents a radical selected from $-C(CH_3)_3$, $-Si(CH_3)_3$, $-CH(R^7)OCH_2CH_3$, $-CH(R^7)OC(CH_3)_3$, dicyclopropylmethyl, dimethylcyclopropylmethyl, or the following cyclic groups:



wherein R^7 represents hydrogen or a linear or branched (C_1-C_5) alkyl group; R^1 and R^4 together with the two ring carbon atoms to which they are attached can represent a substituted or unsubstituted cycloaliphatic group containing 4 to 30 ring carbon atoms, a substituted or unsubstituted aryl group containing 6 to 18 ring carbon atoms and combinations thereof; R^1 and R^4 can be taken together to form the divalent bridging group, -C(O)-Q-(O)C-, which when taken together with the two ring carbon atoms to which they are attached form a pentacyclic ring, wherein Q represents an oxygen atom or the group N(R^8), wherein R^8 is selected from hydrogen, halogen, linear and branched C_1-C_{10} alkyl, and C_6-C_{18} aryl.

57. (Original) The reactant composition of claim 55 wherein said multifunctional polycycloolefin monomer includes a monomer selected from a compound of the formula:



and mixtures thereof, wherein Y represents a (-CH_2-) group and m independently represents an integer from 0 to 5, and when m is 0, Y represents a single bond.

58. (Original) The reactant composition of claim or 56 wherein said multifunctional polycycloolefin monomer is present in a range from 0.25 to 99.75 mole % of the total polycycloolefin monomer composition.

59. (Previously Presented) The reactant composition of claim 33, wherein said composition further comprises a rate moderator selected from the group consisting of water, tetrahydrofuran, 2-methyltetrahydrofuran, diethyl ether, methyl-*tert*-butyl ether, dimethoxyethane, diglyme, trimethylphosphine, triethylphosphine, tributylphosphine, tri(ortho-tolyl)phosphine, tri-*tert*butyl-phosphine, tricyclopentylphosphine, tricyclohexylphosphine, triisopropylphosphine, trioctyl-phosphine, triphenylphosphine, tri(pentafluorophenyl)phosphine, methyl-diphenylphosphine, dimethylphenylphosphine, trimethylphosphite, triethylphosphite, triisopropylphosphite, ethyl diphenylphosphinite, tributylphosphite, triphenyl-phosphite, diethylphenylphosphonite, and tribenzylphosphine, 2-cyclohexenone, triphenylphosphine oxide, and mixtures thereof.

60. (Withdrawn) A salt composition comprising a compound of the formula:

$$C(L'')_z[WCA]$$

wherein C is lithium or sodium, L" is an alcohol and z is an integer between 2 and 8 inclusive, and WCA is a weakly coordinating counteranion.

61. (Withdrawn) The salt composition of claim 58 wherein said alcohol is represented by the formula $R^{9'}OH$, wherein $R^{9'}$ represents linear and branched C_1-C_{20} alkyl, linear and branched C_1-C_{20} haloalkyl, substituted and unsubstituted C_3-C_{20} cycloalkyl, substituted and unsubstituted C_6-C_{18} aryl, substituted and unsubstituted C_6-C_{18} aralkyl, and substituted and unsubstituted norbornenyl wherein said substituents in said substituted groups are independently selected from linear and branched C_1-C_{12} alkyl, linear and branched C_1-C_5 haloalkyl, linear and branched C_1-C_5 alkoxy, C_6-C_{12} aryl, and halogen selected from chlorine, bromine, and fluorine.

62. (Withdrawn) The salt composition of claim 59 wherein said alcohol is selected from methanol, ethanol, n-propanol, isopropanol, *t*-butanol, and 5-norbornene-2-methanol.

63. (Withdrawn) The salt composition of claim 58 wherein said weakly coordinating counteranion is selected from borate or aluminate.

64. (Withdrawn) The salt composition of claim 61 wherein the weakly coordinating anion is a borate or aluminate of the formula:

$$[M'(R^{24'})(R^{25'})(R^{26'})(R^{27'})]$$

wherein M' is boron or aluminum and $R^{24'}$, $R^{25'}$, $R^{26'}$, and $R^{27'}$ independently represent fluorine, linear and branched C_1-C_{10} alkyl, linear and branched C_1-C_{10} alkoxy, linear and branched C_3-C_5 haloalkenyl, linear and branched C_3-C_{12} trialkylsiloxy, C_{18}-C_{36} triarylsiloxy, substituted and unsubstituted C_6-C_{30} aryl, and substituted and unsubstituted C_6-C_{30} aryloxy groups, wherein $R^{24'}$ to $R^{27'}$ can not simultaneously represent alkoxy or simultaneously represent aryloxy, and wherein said aryl and aryloxy groups when substituted are monosubstituted or multisubstituted and said substituents are independently selected from linear and branched C_1-C_5 alkyl, linear and branched C_1-C_5 haloalkyl, linear and branched C_1-C_5 alkoxy, linear and branched C_1-C_5 haloalkoxy, linear and branched C_1-C_{12} trialkylsilyl, C_6-C_{18} triarylsilyl, and halogen selected from chlorine, bromine, and fluorine.

65. (Withdrawn) The salt composition of claim 62 wherein said borate is selected from the group consisting of tetrakis(pentafluorophenyl)borate, tetrakis (3,5-bis(trifluoromethyl)phenyl)borate, tetrakis(2-fluorophenyl)borate, tetrakis(3-fluorophenyl)borate, tetrakis(4-fluorophenyl)borate, tetrakis(3,5-difluorophenyl)

borate, tetrakis(2,3,4,5-tetrafluorophenyl)borate, tetrakis(3,4,5,6-tetra fluorophenyl)borate, tetrakis(3,4,5-trifluorophenyl)borate, methyltris(perfluorophenyl)borate, ethyltris(perfluorophenyl)borate, phenyltris(perfluorophenyl)borate, tetrakis(1,2,2-trifluoroethylenyl)borate, tetrakis(4-tri-*i*-propylsilyltetrafluorophenyl) borate, tetrakis(4-dimethyl-*tert*-butylsilyltetrafluorophenyl)borate, (triphenylsiloxy)tris (pentafluorophenyl)borate, (octyloxy)tris(pentafluorophenyl)borate, tetrakis[3,5-bis [1-methoxy-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]phenyl]borate, tetrakis[3-[1-methoxy-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]-5-(trifluoromethyl)phenyl]borate, and tetrakis[3-[2,2,2-trifluoro-1-(2,2,2-trifluoroethoxy)-1-(trifluoromethyl)ethyl]-5-(trifluoromethyl)phenyl]borate.

66. (Withdrawn) The salt composition of claim 62 wherein said aluminate is selected from the group consisting of tetrakis(pentafluorophenyl)aluminate, tris(nonafluorobiphenyl)fluoroaluminate, (octyloxy)tris(pentafluorophenyl)aluminate, tetrakis(3,5-bis(trifluoromethyl)phenyl)aluminate, and methyltris(pentafluorophenyl) aluminate.

67. (Withdrawn) The salt composition of claim 61 wherein the weakly coordinating anion is a borate or aluminate of the formula:

$$[M'(OR^{28'})(OR^{29'})(OR^{30'})(OR^{31'})]$$

M' is boron or aluminum, $R^{28'}$, $R^{29'}$, $R^{30'}$, and $R^{31'}$ independently represent linear and branched C_1-C_{10} alkyl, linear and branched C_1-C_{10} haloalkyl, C_2-C_{10} haloalkenyl, substituted and unsubstituted C_6-C_{30} aryl, and substituted and unsubstituted C_7-C_{30} aralkyl groups, subject to the proviso that at least three of $R^{28'}$ to $R^{31'}$ must contain a halogen containing substituent; $OR^{28'}$ and $OR^{29'}$ can be taken together to form a chelating substituent represented by -O-$R^{32'}$-O-, wherein the oxygen atoms are bonded to M' and $R^{32'}$ is a divalent radical selected from substituted and

unsubstituted C_6-C_{30} aryl and substituted and unsubstituted C_7- C_{30} aralkyl, wherein said aryl and aralkyl groups when substituted are monosubstituted or multisubstituted and said substituents are independently selected from linear and branched C_1-C_5 alkyl, linear and branched C_1-C_5 haloalkyl, linear and branched C_1-C_5 alkoxy, linear and branched C_1-C_5 haloalkoxy, linear and branched C_1-C_{12} trialkylsilyl, C_6-C_{18} triarylsilyl, and halogen selected from chlorine, bromine, and fluorine.

68. (Withdrawn) The salt composition of claim 65 wherein said borate is selected from the group consisting of $[B(O_2C_6F_4)_2]^-$, $[B(OC(CF_3)_2(CH_3))_4]^-$, $[B(OC(CF_3)_2H)_4]^-$, $[B(OC(CF_3)(CH_3)H)_4]^-$, and $[B(OCH_2(CF_3))_4]^-$.

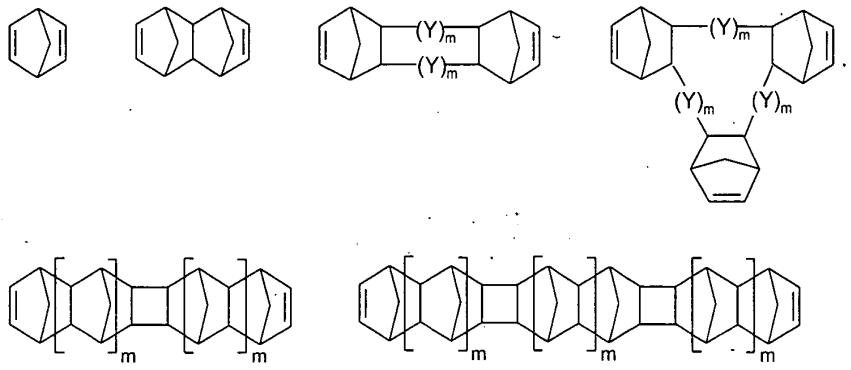
69. (Withdrawn) The salt composition of claim 65 wherein said aluminate is selected from the group consisting of , $[Al(OC(CF_3)_2Ph)_4]^-$, $[Al(OC(CF_3)_2C_6H_4\text{-}4\text{-}CH_3)_4]^-$, $[Al(OC(CF_3)_3)_4]^-$, $[Al(OC(CF_3)(CH_3)H)_4]^-$, $[Al(OC(CF_3)_2H)_4]^-$, $[Al(OC(CF_3)_2C_6H_4\text{-}4\text{-}i\text{-}Pr)_4]^-$, $[Al(OC(CF_3)_2C_6H_4\text{-}4\text{-}t\text{-}butyl)_4]^-$, $[Al(OC(CF_3)_2C_6H_4\text{-}4\text{-}SiMe_3)_4,]^-$, $[Al(OC(CF_3)_2C_6H_4\text{-}4\text{-}Si\text{-}i\text{-}Pr_3)_4]^-$, $[Al(OC(CF_3)_2C_6H_2\text{-}2,6\text{-}(CF_3)_2\text{-}4\text{-}Si\text{-}i\text{-}Pr_3)_4]^-$, $[Al(OC(CF_3)_2C_6H_3\text{-}3,5\text{-}(CF_3)_2)_4]^-$, $[Al(OC(CF_3)_2C_6H_2\text{-}2,4,6\text{-}(CF_3)_3)_4]^-$, and $[Al(OC(CF_3)_2C_6F_5)_4]^-$.

70. (Withdrawn) The salt composition of claim 58 selected from the group consisting of lithium tris(isopropanol) tetrakis(pentafluorophenyl)borate, and lithium tetrakis(methanol) tetrakis(pentafluorophenyl)borate.

71. (Withdrawn) A crosslinked addition polymer polymerized from a monomer mixture comprising a polycycloolefin containing one polymerizable norbornene-type moiety and a multifunctional polycycloolefin containing at least two polymerizable norbornene-type moieties.

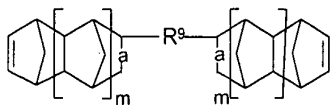
72. (Withdrawn) The crosslinked addition polymer of claim 69 wherein said monomer mixture comprises from 0.25 to 99.75 mole % of a multifunctional polycycloolefin monomer.

73. (Withdrawn) The crosslinked addition polymer of claim 69 wherein multifunctional polycycloolefin monomer includes a monomer selected from a compound of the formula:



and mixtures thereof, wherein Y represents a (-CH_2-) group and m independently represents an integer from 0 to 5, and when m is 0, Y represents a single bond.

74. (Withdrawn) The multifunctional polycycloolefin monomer set forth in claims 29, 55, and 69 wherein said monomer is selected from a composition of the formula:



wherein "a" independently represents a single or double bond, m independently is an integer from 0 to 5, R^9 is a divalent radical selected from divalent hydrocarbyl radicals and divalent ether radicals.

75. (Withdrawn) The multifunctional polycycloolefin monomer of claim 72 wherein said hydrocarbyl radical is selected from C_1–C_{10} alkylene radicals and divalent aromatic radicals.

76. (Withdrawn) The multifunctional polycycloolefin monomer of claim 72 wherein said divalent ether radical is selected from a radical of the formula -R^{10}-O-R^{10}-, wherein R^{10} represents a hydrocarbyl radical.

77. (Withdrawn) The multifunctional polycycloolefin monomer of claim 74 wherein R^{10} independently is selected from the group consisting of C_1-C_{10} alkylene, divalent aromatic radicals, and combinations thereof.

78. (New) A reactant formulation consisting essentially of a procatalyst and a monomer wherein said procatalyst is a Group 10 transition metal compound and the monomer comprises a multi-functional polycycloolefin containing at least two polymerizable norbornene-type moieties.

79. (New) A reactant composition consisting essentially of an activator salt and a monomer wherein said activator salt is represented by the formula:

$$[C(L")_z]_b\ [WCA]_d$$

wherein C represents a proton, an alkali metal cation, an alkaline earth metal cation, a transition metal cation or an organic group containing cation, L" is a labile neutral electron donor ligand, and WCA is a weakly coordinating counteranion, z is

an integer from 0 to 8, and b and d represent the number of times the cation complex and weakly coordinating counteranion complex, respectively, are taken to balance the electronic charge on the overall salt complex

and the monomer comprises a multifunctional polycycloolefin containing at least two polymerizable norbornene-type moieties.